

Discussion.— The osseous pathology takes the high level of complications. This by default of surgical technique in more than 70% of cases. The painful phenomena are essentially represented by the neuromas in more than 45% of cases.

Also the infectious and cutaneous complications.

All these factors, associated sometimes to other traumas delayed the prosthesis.

Conclusion.— The legs amputations of the wars injured are sometimes associated to other serious traumas more serious.

The stumps are often defective and require a surgical resumption. This in the aim to allow the patient the adequate prosthesis and the best possible walking.

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From lower limb injuries to bionic prosthesis: Experience of three combat amputees

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Keywords : Femoral amputation; Bionic knee

Introduction.— We report the case of three soldiers between 22 and 25 years, polytraumatized in 2010 with femoral amputation, fitted with a bionic knee.

Observation.— The three patients are traumatic amputee, at different levels (middle third or Gritti), primary or secondary, of various etiologies (traffic accident, improvised explosion device).

They tested three different knees (polycentric, with microprocessor, bionic), with an appropriate rehabilitation. They were evaluated on quality of gait (fluidity, speed variation...), higher activities of walking (stairs, slopes, irregular ground...), security and subjective tiredness.

At 1 year, they were fitted with prosthesis including contact socket with ischial integration, silicon sleeve and polycentric knee. But, they suffered of mismatches because of a regular strenuous activity.

The try of a microprocessor knee was validated in the three patients following C-leg criteria of the French health insurance. It significantly improves their functional performances, but still perfectible according to these young active patients.

Thus, they have tested Genium[®] bionic knee. Gait is more physiological. Rising slope and stairs alternating steps, automatic obstacles crossing on both sides are now possible.

Discussion.— Seen in the results, the Genium[®] enables the best performances (functionality, safety and perfect control of knee at lower attentional cost) for these patients. It involves specific rehabilitation [1,2] to control the functionality of the knee for perfect intuitive control and eliminate offsets acquired with a polycentric knee (weight on the prosthesis during stance phase, turning basin to initiate the swing phase...).

Not listed in refundable products list by French health insurance, economic aspect remains a major obstacle to the prescription of this knee (associative funding to purchase Genium[®] for our patients).

Conclusion.— The Genium[®] provides real functional gain but there is currently no standardized criteria for validation and evaluation of bionic knees.

References

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From upper limb injuries to bionic prostheses: Experience of three war injured soldiers in operation

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Keywords: Upper limb amputation; Traumatic; Bionic prosthesis; Combat amputee

Introduction.— The number of injuries caused by improvised explosive devices in Wars has increased the number of upper limb amputation. Three military amputees tried upper limb bionic prostheses.

Observation.— Three French soldiers injured in operation were followed in Physical medicine and rehabilitation department between 2008 and 2012.

During this period, they followed a rehabilitation program and prostheses adaptations of forearm amputations.

After that, standard prostheses have been prescribed (aesthetic and myoelectric), patients returned home and resumed on restricted military duties.

The soldiers could, in a second step, try the Michelangelo's[®] one, first in France, during one week, prostheses were lent by suppliers.

After analytical and ecological evaluations, results were positive. Prostheses have been financed.

Discussion.— Even if the results of our tests were benefit for the soldiers, a longer period of evaluation would have been better to get more control over the use of these prostheses.

At present, others bionic prostheses exist. We decided to start a trial protocol: two others bionic hands are tried, during 15 days. Analytical and ecologic program is proposed.

These new technologies prostheses haven't got any standardized validation criteria and are not financed by the military French social services.

That the reason why, we requested private military associations to purchase these bionic hands.

In the future, this experience leads us to think about a standardized specific validation criteria of bionic prostheses, in order to obtain financing through traditional military French social services.

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Communications affichées

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La méthode bio-kinétique du Dr Jacquet et le pied des tranchées



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Introduction.— Au cours de la Première Guerre Mondiale et notamment durant la guerre des Tranchées (1915–1917), les Ambulances du Corps d'armées françaises eurent à soigner un nombre important de soldats (plus de 120 000), atteints du Mal des tranchées ou Pied des tranchées. Dans les cas de gravité moyenne, la méthode bio-kinétique du dermatologue L. Jacquet (1860–1914) faisait partie du protocole de cicatrisation dirigée [1].

Matériel.— L'idée d'appliquer le massage et le mouvement au traitement des dermatoses fut l'un des axes de recherche thérapeutique du Dr L. Jacquet, médecin de l'hôpital Saint-Antoine à Paris. Au massage plastique à double action [4], le Dr Jacquet ajouta le mouvement actif pour « ses modifications dynamiques qu'il imprime aux tissus ».

Initialement utilisée pour les dermatoses de la face [5], la méthode bio-kinétique fut appliquée au pied des tranchées. Nous évoquons les modalités de ce traitement (la mobilisation du pied et la gymnastique élévatoire [2]) au travers du grand nombre de publications traitant de cette pathologie, plus de 200, qui parurent entre 1914 et 1917 [6].

Conclusion.— La méthode bio-kinétique du Dr L. Jacquet, associant massage et mobilisation du pied, fut prônée par certains médecins militaires, pour les soldats de la Grande Guerre atteints du Mal des tranchées [3].

Références

[1] Brocq L. Le traitement des Froidures des tranchées, par la méthode bio-kinétique de Jacquet, *Soc. Med. des hôpitaux*, 19 février 1915, p. 119–23.